M/053/002

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
324 South State, Suite 301
Salt Lake City, Utah 84111-2303

IN REPLY REFER TO:

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(UT-930)

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NOV 4 1994

Mr. Peter D. Stevenson, OSC
Emergency Response Branch
Environmental Protection Agency
Region VIII
999 18th Street, Suite 500
Denver, Colorado 80202-2466

Dear Mr. Stevenson:

Enclosed are our comments regarding the review of the "Preferred Plan Remediation Report" for the Leeds Silver Reclamation. This letter follows our earlier comments of October 17, 1994, and the recent conference call with EPA and the Bureau of Reclamation on October 25, 1994, regarding the remediation plan for Leeds Silver Reclamation. The conference call was helpful in providing the opportunity for the BLM and the State of Utah's Division of Oil, Gas, and Mining (UDOGM) to discuss our concerns regarding the plan and the studies that have been done in support of the EPA preferred remediation plan. We have a number of questions on the plan and the supporting studies and have provided general, specific, and editorial comments.

General Comments

It is the position of BLM that the public lands should not be used as a disposal site or containment area for remediating a hazardous waste site if feasible alternatives exist. If the remediation plan were to be implemented as proposed, it is our understanding that the existing leach pad and pregnant pond would not be neutralized even though one of the potential environmental risks would be releases of leachate from the leach pad into surface or ground water. It is also our understanding that the sediment remaining after metal precipitation and dewatering of the holding pond, as well as other materials from both unpatented and patented lands within the site, would be placed on the leach pad.

We do not believe the report adequately addresses the condition of the leach pad liner and its integrity and the probability of future releases to the environment (either to ground water or surface water) of potential hazardous substances from the disposal area. We also have concerns with the effectiveness and longevity of the geosynthetic cap and the associated responsibilities and long-term commitment for inspection, protection from disturbance (by fencing, etc.), and the related restrictions in land use management options such a feature creates. In this case, the area is close to residences, and human activity is expected to increase in the future. The capping-in-place proposal has many uncertainties, including (1) the effectiveness to prevent future releases, (2) the potential long-term commitment of BLM for

protection and monitoring, (3) the liability for future releases should they occur, and (4) the extent of restricted land use options in an area of future human expansion.

Study results completed by the Bureau of Reclamation in order to develop the remediation plan must be submitted in order for us to assess the reclamation plan adequately as proposed. Without this information, we cannot allow the placement of materials, including the sediment remaining after metal precipitation and dewatering of the holding pond, onto the leach pad. If the studies cannot support that the sediments are nonhazardous, our position will be that the public lands BLM administers will not be used as a hazardous waste disposal site.

Specific Comments

1. Mr. Stevenson's cover letter is confusing as to what features at the Leeds Silver site will be reclaimed under their proposal. The third paragraph of this letter states, "The report does not address some additional threats that have been identified at the site." Yet all five items listed sound like someone is responsible for completing the step. If so, who is responsible for doing the work and who will pay for it?

In addition, item 5 states, " Pump and treat the pregnant pond and holding (overflow) pond. Water in the holding pond will be treated, possibly by raising the pH and precipitating metals out." How will this be accomplished? What chemicals will be used to raise the pH and precipitate the metals? The sediment (sludge) from the ponds will have to be tested in order to determine whether this material may be buried on site or whether it has to be disposed of at a Subtitle C facility. Also, the cost to pump the water from the holding pond into the wetland is figured into the geosynthetic material option; however, there is no calculation for neutralizing of the solutions in the ponds.

2. The first paragraph on the second page of Mr. Stevenson's letter states they would like to be able to use the bond held by the State to defray some of the cost. Since the State holds the bond, they will have to decide how their bond will be used.

3. In the cover letter dated October 4, 1994, the EPA proposes to breach the holding pond but leave the asphalt liner in place. Is there a reason to leave the asphalt liner in place, or can it be removed?

4. The plan proposes to cap the leach pad as is; however, only very limited test results have been provided to BLM. If the pad has acid or heavy-metal-contaminated drainage potential, then remediation for these situations should be identified. The only tests results we have are on the pad material which was surface-sampled as part of the 1991 UDERR report (samples LS-SO-03 and LS-SO-04). The results were that "several metals were detected at elevated levels, but these are mostly below typical regulatory or health-based action levels" (pg 11).

5. If the Geosynthetic Cover option is adopted, what is the effective life of the FML liner?

6. Section 8.2 Natural Material Cover Option—Clay liner placed in 15 cm lifts is appropriate. In addition, they refer to a possible clay source located on site 1,400 feet from the heap leach pad. Once EPA completes their test on the physical and chemical

properties of this clay, we need to know if this clay source will be used in order to assess what if any clearances are required.

The natural-material cover option includes a 30-cm filter layer, a geomembrane of at least 0.5 mm, 30 cm of sand, another 30 cm of filter layer, and finally 60 cm of backfill, including 15 cm of topsoil. Independent verification of clay volumes indicates that the material on site would not be enough to cover the heap. Additional clay material will be required to cap the heap. Have sources for the sand, filter layer and topsoil been identified? Will these materials come from adjacent lands administered by BLM? These locations, if on BLM lands, need to be identified in order to obtain the appropriate clearances in a timely fashion.

The last paragraph in this section states drought-tolerant grasses will be planted to promote evapotranspiration. Natural vegetation within the site includes forbs and shrubs. Appropriate species should be included in the seed mix to prevent unwanted deep-rooted shrubs and forbs from taking hold on the heap leach pad and destroying the integrity of the cap.

7. The proposed plan for the heap leach pad is to cap in place. If this is finally agreed to, then a fence would be necessary to prevent recreationists from racing motor cycles, 4-wheelers, etc., over the top and breaking down the cap. Is this something EPA would fund? If EPA could not pay for the entire cost of fencing the heap leach pad, then could they help us with part of the cost?

8. The plan does not address the off-site contamination in the wetland area discussed in the EPA and UDERR report.

9. Section 7.0 Drainage System—The proposed trenches will divert water around the east and west edges of the pad. The runoff will be directed to the holding pond and then into the wetlands. The proposed drainage system size is not mentioned. Unless we are otherwise convinced, a drainage system around the pad should be designed to drain the 100-year 24-hour storm event. At this site, this is approximately 3.4 inches.

10. Section 7.0 Drainage System—The broken asphalt, ore piles, and the tailings stockpile will be placed on the asphalt-lined heap leach pad. In the December work plan the location and cracks in the pad were to be determined. Has this been completed? Are there cracks in this liner? If so, where? Has there been communication with the heap leach pad and the public well? Prior to placement of any of these materials onto the heap leach pad, the pad chemistry as well as the integrity of the liner must be known. What were the results of the drilling program? What kind of tests were performed and for what elements?

The integrity of the existing asphalt liner underneath the pregnant pond was not addressed. Did the Bureau of Reclamation drilling this spring give any indication of the integrity of this liner? Has a contaminated plume already formed?

11. We understand that EPA funding cannot be used to remove the plant facilities. However, the remediation plan does not include testing the residual materials in the plant facilities to determine whether or not they are hazardous. If they contain hazardous materials, how will they be disposed of?

12. Monitoring of the site after completion of the remediation plan is not addressed. Monitoring of the reclamation plan is necessary in order to determine what features on site should be reclaimed and what features will be used for monitoring. For example, the existing ground water test wells would be left in place and a sump constructed at the lower end of the leach pad/pregnant pond. This sump should be constructed to allow for monitoring and removal of solution, if it becomes necessary. It is also necessary to determine whether or not the reclamation was successful.

The BLM draft policy for monitoring of mine reclamation sites requires a 5-year minimum monitoring period. Will this site, after remediation, fall under the long-term monitoring requirements of RCRA or CERCLA? If there is a release from the site during monitoring, what are BLM's liabilities?

13. Section 3.0 Holding Pond—The plan anticipates that the holding pond water will not be contaminated. However, if it is contaminated, an evaporation pond will have to be constructed on site and the water in the holding pond will be pumped into the evaporation pond. The sediment left in the evaporation pond will be placed on the heap leach pad or in the pregnant pond. We must first determine whether the holding pond contains contaminated water. If water samples indicate contamination, then the location of this proposed evaporation pond will have to be identified for appropriate clearances, e.g., cultural, T & E plant and animals, etc. By BLM draft policy the sediment from the holding pond or evaporation pond cannot be placed on the heap leach pad or in the pregnant pond unless the sediment is determined not to constitute a hazardous waste using EPA toxicity test or other approved methods. If the sludge from either of these ponds is hazardous, then it must be disposed of at a licensed-hazardous waste facility in accordance with applicable State laws. Conclusions of the 1993 REAC report indicate that the sediments and water in the pregnant pond and overflow pond were acutely toxic to test organisms and likely to other aquatic organisms and the magnitude of toxicity suggests a release of the sediment and/or water would result in environmental damage and a catastrophic release would result in significant ecological damage. The conclusions state further that the toxicity was not the result of acidic conditions alone but to other factors related to conductivity and metal concentrations. If the sludge is shown to be nonhazardous, then BLM draft policy dictates that the sludge must be mixed with cement (minimum 20 percent by weight) and then placed on the heap leach pad prior to its being capped.

In this same section, last paragraph, it states, "Upon removal of the sediment, samples should be taken to assure all contaminated soil has been removed from the holding pond." Sediment must be sampled to determine whether this material is hazardous or nonhazardous. The integrity of the liners must be checked in order to determine whether the soils beneath the asphalt liner have been contaminated.

14. Section 4.0 Ore Piles—The ore piles will be excavated of their contaminated material and placed into the pregnant pond and surrounding area. What and where is the surrounding area?

15. Section 4.0 Ore Piles and Section 5.0 Tailings Stockpile—The REAC final report dated July 1993, in the conclusions, page 40, indicates that the ore pile material and tailings stockpile are sources of radioactivity. The cover which indicates that the remediation of the ore piles and tailings stockpiles will not be addressed due to low

mobility of the material and relatively high cost of incorporation into the heap leach pad. What data support the conclusion that this material has low mobility and is therefore not a source of potential contamination to any of the pathways?

16. Section 6.0 Drainage Water—The wetland was supposed to be sampled according to the work plan dated December 1993. What were the results? The dike is assumed to be noncontaminated soil and will be removed after sampling to allow the free flow of the drainage water into the wetlands area. In the December work plan, the dike was to be mapped in order to determine location and volume of the seeps. This information was needed in order to repair the dike to enhance the retention capability of the dike. Will the dike be repaired or breached?

The asphalt liner in the holding pond extending to the dike will be removed. The asphalt will be considered for the possibility of washing until free of all contaminates. Is the asphalt considered hazardous? If so, how will it be handled in the removal action?

17. Section 6.0 Additional Notes—The last paragraph in this section states that more samples must be obtained and analyzed to assure uranium levels are not higher than 10 pCi/gm or that additional isotopes are not present. Different isotopes may require different disposal methodology. Where, when, and how will these samples be taken?

18. According to the December work plan, water-monitoring holes were to be installed at selected locations in the area to identify potential water problems. Where were these holes drilled? What elements were being tested for in these wells? What elements were found in these wells? We need to decide which of these holes should be left open for long-term reclamation monitoring.

19. NEPA documentation is not addressed. We cannot find anything in the BLM NEPA Handbook (H-1790-1) that exempts this proposed action. Therefore, the time involved in completing this process must be included in the overall timeframe for completing the project. Due to the location and the local interest in the area we believe that public participation is appropriate. Before the project contract is let, the EPA is to provide a design report specifying what work will be done to what standards. This report will require a careful analysis to make sure that it effectively meets the BLM's long-term needs.

20. We recognize that additional work will be necessary to restore the area—primarily the removal of the processing tanks, equipment, and paved area from the site, as well as the general reshaping and revegetation of the site. We need to know what will be required to complete these portions of the reclamation plan in order for the site remediation to meet REAC conclusions. If we are required to complete any of these reclamation measures, then we must program for the money. The budget process takes at least a year to complete. We need as much lead time as possible.

Also, enclosed are UDOGM comments. Their comments reflect similar concerns as those stated above.

Editorial Comments

1. Section 8.0 Cap General—The first paragraph under this section refers to section 5.2 Natural Material Cover Option and Section 5.3 Geosynthetic Cover Option. We believe they meant to refer to 8.2 and 8.3, respectively.

2. Section 8.3 Geosynthetic Cover Option—The second paragraph refers to section 5.2. We believe they want to refer to section 8.2.

3. Section 6.0 Additional Notes—This section should really be 9.0 according to the Table of Contents.

We look forward to working with EPA to resolve the remediation and reclamation concerns of both BLM and UDOGM regarding the Leeds Silver Reclamation site and arriving at an effective long-term solutions. If you have any questions regarding our comments, please call Larry Gore at (801) 673-4654 or Craig Zufelt at (801) 865-3053. Please let Larry Gore and Craig Zufelt know when the final reclamation plan and the Bureau of Reclamation supporting information will be available. If you have any questions regarding the State's comments, please call Wayne Hedberg at (801) 538-5340. Thank you for the opportunity to review the reclamation plan and provide our comments.

Sincerely,

/S/ G. William Lamb

G. William Lamb
Acting State Director

Enclosure
UDOGM comments (4 pp)

cc: Mr. Wayne Hedberg
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203